

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listing of claims in the application.

1-36 (Cancelled).

37. (Currently amended) A method of generating cultured functional mast cells, comprising the steps of:

(a) contacting at least one CD34-positive cell with a flt-3 ligand and stem cell factor to generate a proliferated population of progenitor cells; and thereafter

(b) contacting said progenitor cells with said stem cell factor and a cytokine suitable for differentiating the progenitor cells into mast cells, thereby forming a proliferated population of functional mast cells.

38. (Previously presented) The method of claim 37 in which the cytokine is IL-6.

39. (Previously presented) The method of claim 38 in which the IL-6 is human IL-6.

40. (Previously presented) The method of claim 37 in which the cytokine is IL-4.

41. (Previously presented) The method of claim 40 in which the IL-4 is human IL-4.

42. (Previously presented) The method of claim 37 in which the flt-3 ligand is human flt-3 ligand.

43. (Previously presented) The method of claim 37 in which the stem cell factor is human stem cell factor.

44. (Previously presented) The method of claim 37 in which the CD34-positive cell is a human CD34-positive cell.

45 (Previously presented) The method of claim 37 in which the CD34-positive cell is obtained from umbilical cord blood.

46. (Previously presented) The method of claim 37 in which the proliferated population of progenitor cells comprises at least about  $10^7$  cells.

47. (Previously presented) The method of claim 37 in which the proliferated population of progenitor cells comprises at least about  $10^8$  cells.

48. (Previously presented) The method of claim 37 in which the proliferated population of progenitor cells comprises at least about  $10^9$  cells.

49. (Previously presented) The method of claim 37 in which the proliferated population of progenitor cells comprises at least about  $10^{10}$  cells.

50. (Previously presented) The method of claim 37 in which the proliferated population of progenitor cells comprises at least about  $10^{11}$  cells.

51-80 (Cancelled).